Connecticut State Department of Education

Math E-Alert

From the Academic Office

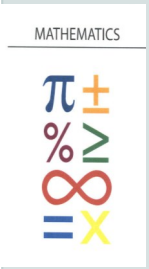
Standards, Curriculum, and Assessment

Date: November 15, 2014

Computer Science in Connecticut

Computer Science nurtures problem-solving skills, logic and creativity. By starting early, students will have a foundation for success in any 21st-century career path. In order to support this effort Code.org is hosting Hour of Code again this year. The Hour of Code is a one-hour introduction to computer science, designed to demystify code and show that anybody can learn the basics. This event will be taking place during December 8-14, 2014, in celebration of Computer Science Education Week. Hour of Code activities are self-guided and there are options for every age and experience-level, from kindergarten and up. For more information or to join the Hour of Code visit http://hourofcode.com/us for more information.

In Connecticut as a culmination of Computer Science Education Week, CREC's Academy of Aerospace and Engineering, the Greater Hartford Academy of Math and Science and the Connecticut Computer Science Teachers Association are joining forces to sponsor Women in STEM-C. This event will take place on Saturday, December 13, 2014 and is designed to be a fun and engaging event to promote STEM education for girls and highlight the role Computer Science plays in supporting all fields of endeavor in our digital world. For more information about this event visit http://goo.gl/nT0Wzo.



As Digital Literacy continues to gain national awareness, Connecticut has started examining how this is addressed in schools across the state. Digital literacy encompasses computer science, coding, computational thinking and informational technologies. It is not about just using technology to enhance learning. Connecticut schools typically offer computer science courses at the high school level as an elective course. Some high schools have agreements with local colleges to be able to offer college credit for the computer science courses taken in the high school class.

In order to promote an expansion of computer science two Connecticut teachers were trained on the Code.org K-5 curriculum and offered various trainings in the fall to equip elementary teachers with the skills needed to bring computer science into their schools. In addition, over the last two years, Trinity College, has trained over 25 teachers in the Mobile CSP course. Mobile CSP provides a complete AP-level course that gets students engaged in learning computer science by building apps for mobile devices. The Mobile Computer Science Principles project is an NSF-funded professional development effort aimed at helping schools incorporate the College Board's emerging AP Computer Science Principles (CSP) course into their curriculum. For more information about this professional development opportunity please visit http://mobile-csp.org . Finally, there have been computer science summer academies offered to expose more students, particularly those in under represented populations, to digital literacy.

In an effort to create a plan to move Computer Science Education forward, the Connecticut Chapter of the Computer Science Teachers Association is asking that you take a moment and complete this brief survey. The goal is to determine the extent to which computer science is available to students across the state and how that availability can be increased. Take this survey now by following this link: https://www.surveymonkey.com/s/

CSDE Updates:

Geometry and Algebra 2: CSDE is working on a Model Curriculum for both Geometry and Algebra 2 as a follow up to the Algebra 1 model curriculum. The curricula is scheduled to be ready in June 2015 and will be posted in July 2015 so that districts can implement it beginning in September 2015 if they choose. Further updates on its completion and training sessions will be made available as soon as possible.

Teacher Quality Partnership Grant: A new RFP has just been issued for 2015 projects. This program aims to raise student achievement by supporting rigorous and relevant teacher professional development activities conducted by partnerships of Connecticut colleges and schools. For more information visit http://www.ctohe.org/tqp/

Awards and Scholarships

The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST):

This is the highest honor bestowed by the United States government specifically for K-12 mathematics and science (including computer science) teaching. This award recognizes those teachers who develop and implement a high-quality instructional program that is informed by content knowledge and enhances student learning. Awardees serve as models for their colleagues, inspiration to their communities, and leaders in the improvement of mathematics and science (including computer science) education. Nominations for the 2015 awards which recognize teachers at the secondary level (7-12) is now open and the applications due in the spring of 2015. For more information please visit www.paemst.org .

Bridging the Gap Between Adoption and Implementation

In 2014, NCTM released the book, *Principles to Actions: Ensuring Mathematical Success for All,* with the primary purpose of filling the gap between the adoption of the CCSSM standards and the enactment of practices, polices, programs, and actions needed for successful implementation. The CCSSM provides a set of content and practice standards with a shift towards focus, coherence and rigor. However, it does not tell teachers, coaches, administrators, parents, or policymakers what to do at various levels in order to make the changes needed to implement these standards.

Principles to Actions is based upon 6 guiding principles that reflect experience and research evidence about excellent mathematics programs. These are Teaching and Learning, Access and Equity, Curriculum, Tools and Technology, Assessment, and Professionalism. For each of these there is a table that includes productive and unproductive beliefs to give a realistic appraisal of our current situation in math education and suggestions for overcoming the obstacles we face.

In addition, the first Guiding Principle, Teaching and Learning identifies 8 Mathematics Teaching Practices that should be consistent elements of every math lesson. For each teaching practice there are identified teacher and student actions that would demonstrate the practice. The book pulls in real classroom examples to further illustrate the teaching practices.

Finally, there is a call to action to ensure that mathematical understanding and self-confidence occurs for all students. This is a valuable resource for all stakeholders in math education. We all play an important role in supporting the success of students to ensure a bright future.

Professional Development Opportunities:

Assessment Suite Workshops: The CSDE in conjunction with the RESC Alliance will be offering a series of workshops to further familiarize educators with the Smarter Balanced Assessment System. The first two workshops are already underway. They are Using the Digital Library to Support Teaching & Learning and Connecting the Claims to Classroom Instruction. The third in this series, Using Interim Assessments to Inform Instruction will be kicking off at the end of January. To register for these opportunities and learn the latest information about the Smarter Balanced Assessment System, please visit http://ctcorestandards.org/?page_id=1955 or contact your local RESC.

Principal Webinar Series: CSDE will host a series of webinars for principals this year. These will be held on the last Wednesday of each month from 1 to 2 pm except in December. The topics for these are What Should I See in the Classroom, What Do All School and Family Partners Need To Know, Supporting Teachers in their Professional Learning, Meeting the Needs of All Learners, Supporting ALL Learners, Using Assessment to Engage Students in their Own Learning, and Checking In on Progress With Data. If you are unable to join the webinar live, they will be available on-demand through the CTcorestandards.org website.

ATOMIC Conference: The Association of Teachers of Mathematics in Connecticut will hold their Annual Meeting & Conference on December 2, 2014 in Cromwell. For more information and to register please visit http://www.atomicmath.org/.

Teachfest Connecicut: Principals Academy: Principals Academy will be a day long deep-dive on the new mathematics and literacy standards aimed at helping K-12 Connecticut administrators become powerful instructional leaders in their schools and districts. Six virtual webinars and online PLC workshops will follow the event to deepen and continue the learning. The hands-on event is scheduled for December 2, 2014 to register visit http://ctcorestandards.org/?page_id=5358

Websites and Resouces

http://ctcorestandards.org: This website contains a variety of up to date information relating to CCS. There are links to professional development opportunities, materials for teachers, including links to previous professional development workshop materials and videos, CCS math documents and resources for family and community

http://www.smarterbalanced.org: This website provides the most recent information available about the Smarter Balanced Assessment. It includes sample items, resources, publications, and upcoming events.

Digital Library: The Digital Library is an online collection of instructional and professional learning resources. Resources include lesson plans, unit plans, rubrics, instructional strategies, and professional learning materials. It also includes collaborative features that allow educators to rate resources and to pose questions and share expertise through online forums. Contact your District Test Coordinator for access information.

http://www.mathcounts.org/: This website details the three distinct programs of the MATHCOUNTS Foundation. Through these programs, MATHCOUNTS strives to engage middle school students of all ability and interest levels in fun, challenging math programs, in order to expand their academic and professional opportunities.

http://code.org/: This website provides a variety of resources for learning and teaching computer science. In addition it provides some astonishing facts about the needs of computer science education in todays digital world.

http://ime.math.arizona.edu/progressions/: This website provides the progressions documents for all of the domains at the various grade bands. This is a great resource for unit planning to ensure coherence of the standards.